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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,349	01/05/2001	Donald E. Woodmansee	9038-120000	3971

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EXAMINER

PERRIN, JOSEPH L

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 09/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,349

Applicant(s)

WOODMANSEE ET AL.

Examiner

Joseph Perrin, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, drawn to a method of cleaning, classified in class 134, subclass 13.
- II. Claims 11-19, drawn to a system for cleaning, classified in class 134, subclass 102.1.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the processw as claimed can be practiced by another materially different apparatus such as one without a cleaning gas accumulator, without a mixing chamber, and/or without a coupling.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

3. During a telephone conversation between Examiner El Arini and applicant's representative, Mr. Chris Caseiro on 23 July 2002, a provisional election was made with

traverse to prosecute the invention of Group II, claims 11-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

5. It is noted that the present application has been filed without an Information Disclosure Statement. Applicant is reminded of the duty to disclose information material to patentability in accordance with 37 CFR 1.56(a), which states:

Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned.

Claim Objections

6. Claim 19 is objected to because of the following informalities: The claim lacks punctuation, such as a period. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, lines 5-8 render the claim as vague and indefinite. It is unclear what is meant by a "coupling". Is this cleaning tube (26)? Moreover, it is unclear how a "coupling" is "designed to direct" cleaning fluid in a "sheeting manner". Clarification and correction are required.

Claim 14 is considered vague and indefinite. A single claim which claims both an apparatus and the method steps of using the apparatus (i.e., "condensing said liquid" in line 3) is indefinite because this type of claim fails to positively recite the boundaries of protection. If applicant is attempting to describe the structural limitations by the limitations' functions with regard to the apparatus, it is recommended that applicant uses acceptable structural claims language for the claimed apparatus and not method steps, i.e. "for condensing said liquid". However, it is noted that this claim language

merely describes a future intended use of the apparatus and is given little patentable weight.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

10. Claims 11-12 and 14-18 rejected under 35 U.S.C. 102(e) as being anticipated by US 6,423,152 to Landaas.

Landaas teaches a cleaning apparatus for hollow cleaning site structure A having a gas inlet (gas source) 16, a mixing chamber 18 connected to the structure by a coupling, a control arrangement (valve) 17 coupling the gas source to the mixing chamber, an expansion separator (heat exchanger) 33 for separating the gas and liquid/particulate mixture, a filter 7 coupled to the separator, a measuring unit (rotameter) 5, coupled to the filter, and gas and liquid return ducts to recycle the gas and liquid to create a closed-loop system (see entire reference of Landaas, for instance, Figure 3 and col. 3, lines 10-65). Landaas also teaches that it is known to utilize water and air as the cleaning liquid and gas, respectively, in such an apparatus (see, for

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instance, col. 1, line 65 to col 2, line 3). Although Landass clearly states utilizing a cleaning gas such as air via gas inlet 16, Landass does not expressly disclose a gas source such as a gas accumulator. Therefore, the position is taken that Landass must inherently have such a gas source since a gas source would be required to operate the apparatus of Landass.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landaas in view of US 5,954,911 to Bergman et al.

As noted above, Landass teaches the claimed invention, with the exception of a gas filter and heater. Bergman et al. teaches that it is known to utilize a gas filter 297 and gas heater 299 prior to mixing a gas and liquid in a gas/liquid cleaning system (see, for instance, Figure 4 and col. 9, lines 58-67).

Therefore, the position is taken that a person of ordinary skill in the art at the time the invention was made would have been motivated to modify the cleaning system, disclosed by Landass, with the gas filter and heater, disclosed by Bergman et al. for the purpose of preventing contaminants from entering the cleaning system and maintain purging of the vapor/mist and drying of the structure to be cleaned.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landass in view of US 4,059,123 to Bartos et al.

As noted above, Landaas teaches the claimed invention utilizing a liquid/air cleaning mixture. Landaas also teaches that it is well known in the art to utilize liquid cleaning/flushing systems such as jet water (see, for instance, col. 1, line 65). Although Landaas teaches cleaning hollow structures, such as inner walls of pipes, Landaas does not expressly disclose utilizing such systems to clean turbine buckets.

Bartos et al. teaches that it is known to utilize gas to pressurize water in a self-contained turbine cleaning system with a gas accumulator 14, a mixing chamber 18, and a coupling 94 to direct the cleaning fluid from the mixing chamber to the turbine to be cleaned. Therefore, the position is taken that a person of ordinary skill in the art at the time the invention was made would have been motivated to utilize the cleaning system, disclosed by Landaas, in the cleaning of turbine engines, as disclosed by Bartos et al. to provide an improved cleaning system for hollow structures such as turbine buckets.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,938,855 to Bowden, Jr., which discloses cleaning a turbine component by immersion and agitation.

US 5,618,353 to Irvine et al., which discloses an apparatus for cleaning internal airfoil passages utilizing heated cleaning fluid.

US 5,507,306 to Irvine et al., which discloses an apparatus for cleaning internal airfoil passages utilizing heated cleaning fluid.

US 5,464,479 to Kenton et al., which discloses cleaning turbine blades utilizing the flushing of water through the turbine.

US 5,290,364 to Stein et al., which discloses cleaning internal passageways of turbines utilizing blasting with soluble blast media.

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WO 00/05002, which discloses a device for cleaning a hollow part of a turbine bucket utilizing flushing the bucket with cleaning fluid.

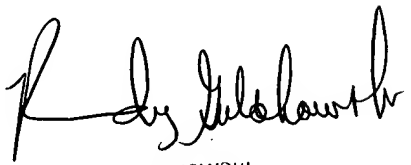
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Perrin, Ph.D. whose telephone number is (703)305-0626. The examiner can normally be reached on M-F 7:30-5:00, except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703)308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Joseph Perrin, Ph.D.
Examiner
Art Unit 1746

jl
August 26, 2002


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
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